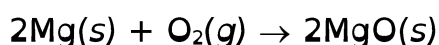


## ANSWERS: Reactivity of metals with oxygen

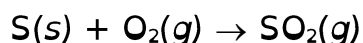
1) A grey strip of magnesium ribbon reacts with the colourless gas oxygen by burning with a bright white light. White smoke is given off and a white ash remains after the reaction.

Yellow solid sulfur powder burns in oxygen (colourless gas) with a blue flame releasing a white pungent gas.

The magnesium is reacting with oxygen to form the (ionic) compound magnesium oxide.



The sulfur atoms react with oxygen atoms to form molecules of sulfur dioxide.



(States are not required in balanced equations.)

### 2) Products formed:

Calcium oxide is formed when calcium reacts with oxygen.

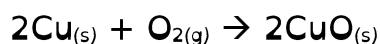
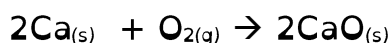
Copper oxide forms when copper is heated in air.

### Linking observations:

The white ash produced in the reaction with oxygen is calcium oxide.

The black coating on copper metal when heated in air is copper oxide.

### Balanced symbol equations:



### Place on activity series:

Calcium is more reactive than copper according to the activity series. We can see that this is the case by looking at the results of the reactions of calcium and copper with oxygen.

Calcium burns when heated in oxygen to form calcium oxide